

**Oregon Tualatin Valley
Amateur Radio Club**

The OSCILLATOR

FEBRUARY 2008

Volume 31 Issue 2
Our 30th Anniversary

The Oregon Tualatin Valley Amateur Radio Club is a special service club related to ARRL: The National Association for Amateur Radio. We seek to advance the Amateur Radio Service through:

- ⇒ Education and Training of new and licensed amateurs
- ⇒ Public Service and Emergency communication
- ⇒ Hobby nets, contests and meetings
- ⇒ Social events

Membership is available to anyone. An amateur radio license is not required.

**A Nurse's Experience
in the Vernonia Flood**

By Kristin Tomson K7KWT

Margie Simmons RN KE7HUR, retired in 2006 from a career in hospice and home health nursing for 30 years, and became **KE7HUR** in May of 2006. She volunteers in Emergency Services for the Oregon Trail chapter of the American Red Cross (ARC). She is a member of the Oregon Tualatin Valley Amateur Radio Club (OTVARC), and Washington County, Oregon ARES/RACES.

The Western Oregon storm of December 2-3, 2007 caused up to ten inches of rain to fall on the town of Vernonia. The subsequent flooding was thought to be even more severe than the previous flood of 1996. On Sunday, December 2nd, Margie got a call from the American Red Cross (ARC) asking if she would be willing to help, and could she be ready to deploy in 24 hours or when road conditions allowed? She remained on standby until Tuesday afternoon, December 4th, when the road into Vernonia became passable. She headed out with another nurse, **Susan Murphy RN**, a veteran of Hurricane Katrina who possessed excellent triage and organizational skills. They drove together in a rented Red Cross vehicle, not entirely sure of reaching their destination due to evidence of widespread flooding along the way. After being directed by local residents through the less

SEE NURSE, Page 2

**FEBRUARY LUNCH
BUNCH**

**Saturday February 23, 2008
1:30 pm**

The Home of
Natalie Mealer WA6QVM
16200 SW Cameron Court - Tigard
Limited Seating

RSVP to Linda at 503.646.7832
She will coordinate what we bring
For the lunch together

Map Link
At otvarc.org

For More Information
call **KC7YTD Linda**
503.246.8879

**TWIN STORMS
COVERAGE CONTINUES**

Paul Evans, policy adviser to Oregon Governor Ted Kulongoski on emergency preparedness, is quoted in a recent publication of one of Oregon's most influential public relations firms. He said an exercise just two months before the twin storms of December 2007 was invaluable preparation for the actual event. Evans said private ham radio operators performed a critical role since other telecommunications access was down.

**CLUB MEETING
WEDNESDAY, February 13th**

OTVARC is affiliated with ARRL: The National Association for Amateur Radio and is a *Special Service Club*. We meet on the second Wednesday of each month.

Our February 13th meeting will be held at our regular meeting location: **Peppermill Restaurant**, 17455 SW Farmington Rd, Beaverton. A pre-meeting dinner is available at 6:00 pm. The meeting at 7:00 pm. Our Section Manager, **Bonnie Altus AB7ZQ** will make an official visit. She'll talk about what the ARRL is doing in Oregon and whatever else may be on her mind. Don't miss Bonnie. Guests are always welcome.



THE BARREL

Read the collected thoughts of our president, **Robert WN7O** here...or online at the club web site:
www.otvarc.org/president/index.html

At the web site, you'll find past BARREL contributions, plus other up-to-date information on the life of Oregon Tualatin Valley Amateur Radio Club.

NURSE, from Page 1

flooded areas of Vernonia, they made their way 1.5 miles north of town, up a fairly steep hill, to the designated Red Cross shelter at Cedar Ridge Sports Camp. Arriving just before dark, the two nurses were delighted to find lights, heat and cell phone coverage available. With their nursing knowledge in much demand, they dove right in, began setting up the nurse's station and started seeing shelter residents with urgent medical needs.

Cedar Ridge Sports Camp is forested, scenic and rural with the Nehalem River running down below the property. The camp is divided into a small upper lodge and large lower lodge with a downhill road connecting the two lodges. Off in the field to the left, are 5 bunkhouses where most of the residents were housed. The larger, lower lodge was used for cooking, feeding, nurse's station and Ham radio. The nurses housed the frail elderly in the homelike upper lodge in order to monitor them more closely. Margie particularly remembers these patients: a couple, both nearly bed bound with high medical needs, and their adult son with a draining lower leg lesion, a diabetic, WW2 veteran arriving with a blood sugar above 300, and a couple with advancing dementia.

An excellent addition to the disaster team, **Bill Lennox KD7EFP**, arrived on December 5th. Bill is an experienced Ham radio operator and former paramedic, also retired Air Force. Bill spoke right up and asked Margie where she wanted the radios. Vernonia was still without power; therefore, the only communication with the paramedics or Dr. Gilmore at the Vernonia Firehouse was via ham radio. Margie, drawing upon her Ham radio exposure in OTVARC and WashCo ARES with her husband, **Joel Simmons AD7IS**, and appreciating the vital piece Ham radio and communication plays in a disaster said, "Right next to the nurse's station, so we can communicate quickly with the Vernonia Fire Station regarding any emergencies." Although she brought along her handheld, Margie had no time to practice on the radio as nursing duties took priority. The repeater in Vernonia was down and it took Bill's more powerful radio signals to bounce off a repeater on the coast. Margie felt confident in turning communications over to Bill's expertise. She recalled that it was very comforting to hear many familiar voices over the airwaves while working at the nurse's station. Eventually, Bill installed Ham radios in the upper lodge for improved signal, convenience and emergency use, especially during the night, since the team was also housed there. Besides ham radio, 10 Family Radio Service (FRS) radios were ordered from ARC to

improve staff communication and save the trek up and down the hill between lodges and the bunkhouses.

The team tried to handle most of the medical issues arising in the shelter since they were well aware of the overload at the fire station. Some shelter residents transported to the fire station for further treatment included a woman with uncontrolled vomiting, a man with difficulty breathing from a probable rib fracture, children with high fevers/dehydration, and some folks with infected lacerations and possible fractures.

Margie and Susan worked closely together sharing nursing, triage and general duties. Susan often took on shelter manager duties, whenever the official manager, **Lisa Orth**, was taken off site for more pressing emergencies in the surrounding areas such as Mist, Jewell and Birkenfeld. Margie kept in close contact with ARC Headquarters via cell phone regarding priority patient/shelter/supply needs and shelter conditions, especially public health issues. ARC mental health worker, **Mary Post**, was invaluable, helping the team with severely traumatized residents who had lost everything and were destitute.

By December 7th, the shelter population skyrocketed to about 120 and 6 residents, including children, came down with flu-like symptoms. Extremely concerned, the team isolated the 6 in one of the bunkhouses and monitored them closely to prevent an outbreak. Sanitation and public health became high priority. People were coming into the shelter cold and wet with muddy clothing. The water was contaminated. Showers were not allowed or very limited for 2 days. Bottled water, nearly gone, was rationed.

What a beautiful sight when the National Guard trucks soon rolled down the hill well supplied with drinking water and cleaning supplies! Margie made sure hand sanitizers were placed everywhere and frequent hand washing strongly encouraged. The shelter, especially eating areas and restrooms, was cleaned and disinfected frequently, trash contained. Bedding and clothing were changed as needed. After all this hard work, the team was relieved that the flu virus was contained and no other contagious diseases emerged!

The initial workers mentioned here plus several, hardworking ARC volunteers stepped in and did what needed to be done. By December 9th, after 5 days straight, red-eyed and fatigued, they were relieved to see that six nurses and two mental health workers were arriving with more relief workers on the way to replace them. The shelter population decreased to below 70. People were finding housing and services.

See NURSE, Page 3

MEMBERSHIP RENEWAL

Not renewed for 2008? **RENEW NOW** to be included in the 2008 Roster. Dues for 2008 are \$20.00 for a regular member, \$5.00 additional for all persons living at the same address. Dues are on an annual basis and were due by January 31st. LIFE Members pay no dues but donations for club projects and needs are appreciated.

Please check the current Roster to see that your information is correct. If not, email your changes to otvarc@gmail.com or mail to the club postal box.

<http://tinyurl.com/296rdb>

NURSE, from Page 2

In concluding the interview, Margie stated, "Overall, the experience was very rewarding. I discovered resources within myself I was unaware of. It's a good feeling to know I was able to help at a critical time. Yes, I would do it again, but hope disasters of this magnitude don't occur anytime soon. I just wish all those affected could have gone home to a nice warm house and loving husband as I did. I feel so fortunate."

This story is taken from an interview with Kristin Tomson K7KWT, held, January 9, 2008, prior to the OTVARC meeting, at the Peppermill Restaurant, Aloha, Oregon, with Margie Simmons, RN, KE7HUR, one of the first responders on site at the Vernonia Floods of December 2007.

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Amateur Radio License Examinations

The watchword for the VE business continues to be "unpredictability." I think we can safely say we have gotten through the bulk of the General upgrades that burst the floodgates when they dropped the CW requirement a year ago. However, there is still a very high level of interest that is prompting people to apply for their first license. Some of this may be due to the CW change and the resulting publicity. Some is probably a result of the disasters we've faced in the last couple years.

After the unexpectedly large turnout for the November session we were well-prepared for December. Over-prepared, actually. I had two full teams of VEs show up and then only seven applicants came compared to well over twenty in November. So a lot of VEs got the afternoon off and thanks go to **Dick KA7SPS**, **Paul KC7PMU**, and **Andy KE7AUB** for staying around to work. We had 4 new Technicians, 1 upgrade to General and one Extra. One candidate for Extra didn't quite make it but since he hadn't prepared we'll just call that a test run. He was only there to accompany his fiancé who was getting her license.

In January I recruited a much more modest number of VEs but found a pretty healthy turnout of 15 applicants. We managed that number without too much confusion. When all was done we had 11 new Technicians, 3 upgrades to General, and one good try at an Extra. Thanks to **Monty AB7WS**, **Will N7THL**, **Jennifer K7NAA**, and **Len W7JLX** for this one.

We held a special evening session on January 14 to license an Intel employee visiting on business from Malaysia. He is **Cheng Yee Chan 9W2CCY** and has held the Malaysian call sign since 2003. He is now also licensed a U.S. General Class operator **KE7QYV**. We hope to hear him on the air here next time he visits. **Claire N7CM** and **Ernie K7EAJ** were VEs at this session. Thanks!

On Saturday, February 2nd, we had 18 candidates. More on this session in next month's issue. Upcoming test sessions are Saturday, March 1 and Saturday, April 5.

73, Carl WS7L

OTVARC ADDRESS:
880 NE 25th Ave Ste 2-160
Hillsboro OR 97124-6258

HAMFESTS & CONVENTIONS**16 February 2008****Salem Hamfair****Salem Repeater Association****Rickreall**<http://www.w7sra.com>

Talk-In: 146.86 (PL 186.2)

Don Brusch K7UN

PO Box 5130

Salem OR 97304-0130

503-371-8070

k7un@arri.net

8 March 2008**Electronics Fleamarket****Mike and Key ARC**

Puyallup, WA

W. Wash Fairgrounds Exhibit Hall

www.mikeandkey.org/flea.htm

Talk-In: 146.82/22 (PL103.5)

Michael Dinkelman N7WA

22222 148th Avenue SE

Kent, WA 98042

253-631-3756

mwdink@eskimo.com

30, 31 May, 1 June 2008**SEA-PAC****Northwestern Division
Convention**www.seapac.org

Talk-In: 146.660

C. Wayne Schuler, AI9Q

16414 NE 21st Avenue

Vancouver, WA 98684

Phone: 360-892-5580

ONLINE CALENDAR:my.calendars.net/otvarc/

Want to keep track of events planned by various interest groups within the club? Want to check out the date for upcoming contests, projects, hamfests, etc. Here is the place to start. You find a link to this page on our web site www.otvarc.org. Have you checked out our web page lately? Is there something you'd like to see included there?

Your business advertising in *THE OSCILLATOR* is seen each month. We have more than 190 members who read *THE OSCILLATOR*.

To include your "Business Card" ad (\$48.00 annually) or "Display" - HRO size ad (\$60.00 annually), contact **Maureen O'Rourke** at 503.591.9641. There is currently limited space available.

Happy February Birthday

1 Mary Jo Mosby	KB7NJE
4 Ken Davenport	K7SIX
5 Janet Bell	WB7FJC
6 Thomas Hill	WA3RMX
7 Edwin Elder	KE7DOL
8 Willis Ranes	N7DZR
9 Eric Kosko	WA7YSU
12 Larry Erickson	N7ZZZ
13 George Lottes	WG7U
15 Alvin Carlson	KB7VHI
15 Wayne Schuler	AI9Q
21 Sharon Coan	KA7NAN
24 Richard Booth	W7VPV
26 Roger Noyes	KA7RNN
27 Alan Chinnock	KB7POR
27 Dale Mosby	K7FW
28 Paul Lucas	WB6SHR

Have we missed your birthday? Likely we do not have your correct date in our database.

Send updates and corrections to
otvarc@gmail.com

J. Steven Sanders
Certified General Appraiser
Sanders Appraisal, PC

Orengo Station, Hillsboro, OR 97124
Fax: 503-547-8200

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A STORM STORY...

Submitted by **Don Stettler KK7TN**

I am certain there are many stories that can be told about human kindness shown to victims of the back-to-back storms that hammered the Pacific Northwest in early December, 2007. However, an incident of compassion I witnessed had a miraculous aspect.

On Sunday December 9th, nearly a week after the storm occurred, **Maureen O'Rourke KA7LAP**, knowing that I frequent the ARES District 1 Net that meets daily on the 147.32 repeater at 7:30 p.m., left a message on my answering machine asking that I listen for a station checking in from the coast. She was hoping to find someone who could help an elderly widowed friend who lives alone in the Rockaway Beach area. Her friend had been without electricity for seven days and was having trouble getting going again. Among other things her smoke alarms were chirping because they needed new batteries. Anyone who has experienced that knows how annoying that is. The woman did not feel steady enough to get on a chair to replace the batteries herself.

I tried to return Maureen's call several times but the phone was busy. I was intending to tell her that stations on the coast rarely checked in and that she should be thinking about a Plan B. With just a few minutes left in the D-1 Net Maureen checked in, something she rarely does. The net control station allowed her to make a plea for someone to help her friend. Since I knew her phone would not be busy I called her. Seconds after she answered the phone **Rueben Descloux AK7P**, checked into the net from Tillamook saying he could help. After the net was over, Rueben told Maureen that he was the Tillamook County Fire Marshall and that he could see that installation of fresh batteries in her friend's smoke alarms happened. With that Maureen gave Rueben the name and address of her friend.

Maureen's friend called her the next afternoon to tell her what had happened. On Sunday evening a deputy sheriff dropped by for a quick check on her. Then, on Monday morning, three Red Cross volunteers, themselves seniors from the San Francisco Bay area, came to her door offering their assistance. One of the volunteers was a woman who agreed to help her take a shower, something she had not been able to do for some time. While enjoying a long hot shower one of the male volunteers vacuumed her house while the other one took her two dogs for a walk. The volunteers installed new batteries in the smoke alarms too.

ARRL BOARD MEETS IN HOUSTON

The ARRL Board of Directors held its first 2008 meeting in Houston, Texas on January 18 - 19. Two new field appointments were created: Assistant Section Emergency Coordinator and Assistant District Emergency Coordinator. The Board authorized **Dave Patton NN1N**, Manager of the Membership and Volunteer Services Department, to develop and implement terms of reference for these positions.

New England Division Director **Tom Frenaye K1KI**, as President of the ARRL Foundation, gave a report to the Board on the Foundation's activities. He said scholarships totaling \$60,000 were awarded in 2007; three new scholarships have been added for 2008. The Foundation's assets amount to approximately \$2.4 million, of which most supports the scholarship program. He noted that the number of deserving scholarship applicants greatly exceeds the number of available scholarships. Frenaye will continue to serve as Chairman of the Foundation. Northwestern Division Director **Jim Fenstermaker K9JF**; Midwest Division Director **Bruce Frahm K0BJ**, and **Eugene Hastings W1VRK**, were selected to serve as Foundation Directors. The next ARRL Board of Directors meeting is scheduled for July 18 - 19, 2008.

FEBRUARY QSO PARTIES

This month is a busy month for state and regional QSO parties. Take time to tune the bands, help out the participants and work a few "new-ones" for your log! No fewer than 8 states and 1 Canadian province are available this month. For additional details see the "Contest Corral" section in the February issue of QST magazine.

73, Ron O'Connor - KD7VIK

146.960 MHz Repeater Off Shoutcast

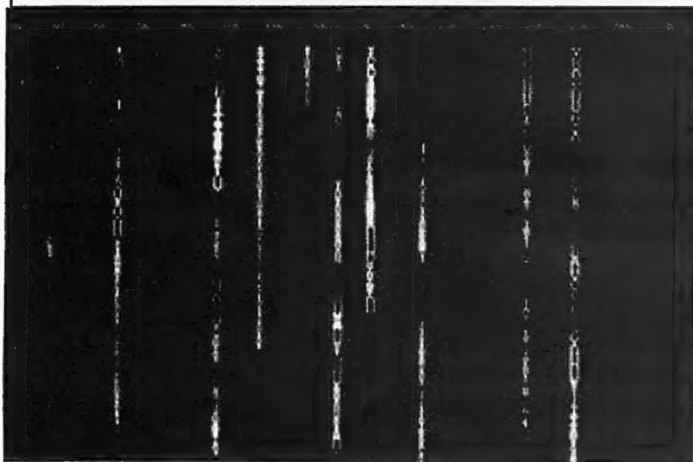
The club's 146.960 MHz Repeater is normally heard via the Internet at www.shoutcast.com. Search for **W7OTV**. **Frank K2NCC** advises that since the machine is down frequently with problems, the shoutcast link has been made to the 146.84 MHz Portland Amateur Radio Club machine. 146.96 will return when repairs are made.

Some might call it coincidence but I call it a miracle.

[**Don Stettler KK7TN** is past-president of Oregon Tualatin Valley Amateur Radio Club. He is active in Washington County ARES and often serves as net control for ARES nets.]

10 Tips for the PSK31 Digital Mode

- Frank K2NCC



PSK31 is arguably the most popular amateur radio digital mode. It utilizes phase-shift-keying to provide robust, narrow signal width communications, and requires very little power to QSO the world!

- Use the center of your waterfall. Testing will show that your transmit (TX) and receive (RX) will be strongest there. Don't blindly use 1000Hz tone or strictly follow the VFO 'set it and forget it' concept. You can easily lose 20% or more of your power on each edge of your pass band. Pass band centering of the signal will give the best results of both RX and TX.
- There's no need to have the waterfall streaking bright red. Set your rig's volume to a low level (less than 25% of max) and adjust your waterfall and soundcard levels for a good contrast. Do not overdrive your soundcard! Get the background noise and the transmit trace well defined and separate. Keep in mind, how your waterfall looks does not impact decoding, but it is harder to work it if you can't see it.
- Use UPPER CASE characters sparingly. Lower case text in PSK31 varicode transmits fewer bits of data, thus you'll increase transmit speed and improve the likelihood of proper decoding on the other end. For example, the difference of a lowercase e and an uppercase E is five times more bits! (e=11 vs. E=1101101101)
- Enable your RF Attenuation and increase the volume. This helps keep a strong signal from wiping out the weaker ones. Attenuation will probably be around 20 dB, but by dropping the noise level, the signal readability improves. AGC (auto gain control) does nothing for a weak signal; it only levels the louder ones.
- Use your digital modes software, or a program like Spectrogram, to see what your noise level is with the radio off. This will give you an idea of how 'clean' your soundcard is. Typically, onboard (built-in) sound hardware (as found in most 'mainstream' computers like Dell or HP) does not have a signal-to-noise ratio as good as an inexpensive (less than \$50) separate soundcard. When purchasing a soundcard, look for something with over 100 signal-to-noise ratio in the specifications.
- Consider dual monitors (most modern video cards have two jacks). This allows you to have the waterfall or spectrum display on one screen, and your logger, text window, etc. on the other. It makes a huge difference in speed and ease-of-use when you don't have to swap between screens or use smaller windows for your QSO.
- Keep your ALC reading during transmit to as close to zero as possible. This will keep your signal clean and your IMD at a good level (-20s or better is ideal). Your power output will drop, but there's no need to 'smoke' the transmit level. PSK31 is about an 80% duty cycle. Even with a full duty cycle rig, it still needs to dissipate heat! Besides, 20 watts more makes little difference. Output of around 50W is enough to work the world, and your fellow CQs will appreciate the courtesy. Also be sure your voice processor is NOT enabling when using digital modes.
- Ask for an RSQ (readability, strength, quality) report! When in a QSO, send just a tone and ask for your IMD and a report on how your trace looks. This will give you a better idea of adjustments needed.

- There are hundreds of digital modes. To get started or to learn more about the most common ones, acquire ARRL's 'HF digital handbook' by Steve Ford, WB8IMY. For the technical types, be sure to snag Roland Prosch's (DF3LZ) 'Technical Handbook for Radio Monitoring'.

'BONUS' TIP:

- Try 30 meters PSK31! It's a robust band, offering the best of 20M and 40M. It's a small segment of a no contesting band. Used only for digital modes and CW. Be sure to operate within your privileges. PSK31 can typically be found around 10.140.

DEFINITIONS of TERMS USED:

AGC (Auto Gain Control): The ability to reduce signal strength on-the-fly (fast or slow), giving you a more level audio reception on stronger stations.

ALC (Auto Level Control): A voltage adjustment or reading, indicating your TX signal levels. ALC is designed to control voice and carrier signal levels, not digital modes. Typically, if the ALC meter moves, then the microphone gain is too high.

Signal-to-noise (S/N) ratio: A comparison of the signal levels to the relative noise level. Ideally, a perfect signal would have no noise, but realistically, you'll want a S/N ratio well within the tolerances of the mode you're using. PSK31 tolerates about a 10dB S/N ratio.

dB: Sound level, or 'decibels' are used to measure the relative strength of a signal.

Digital Mode: A converted signal transmitted from your radio to be 'de-converted' by the receiving station. Much like a computer modem, a digital feed is converted to analog, sent across a transmission medium, then reconverted back to a readable signal at the receiving station.

Duty cycle: The total time of actual transmission levels. When your radio is transmitting, there's an on/off process that takes place. Transmitting at a 100% duty-cycle indicates that you are using 100% of your radio's power, 100% of the time. Better radios will allow this, while others will eventually fail under the pressure of such a load.

IMD (Intermodulation Distortion): The ratio, in dB, used to determine the quality of your transmission. Unwanted 'products' or signals reduces IMD levels. More power does not mean better copy!

Overdrive: Turning the volume of your radio up so high that you risk damage to the soundcard, or cause signal 'splatter'. Similar to maintaining your ALC levels.

Pass band: The range that your transceiver can receive when on a single frequency. Typically around 3000Hz wide.

PSK (Phase Shift Keying): A form of modulation that shifts the transmit signal in order to carry more information. **PSK31:** is a digital mode created in the 1990's by Peter Martinez (G3PLX) that is about 31Hz wide on your waterfall.

RF (Radio Frequency) Attenuation: A suppression of signals received. You'll often see a noise level reduction, with a minor sacrifice to the desired signal reception. Check your radio's manual on how to adjust it.

RSQ (Readability, Strength, Quality): Much like the familiar 'RST' reports, using a 599-type reporting scheme. Instead of 'Tone' (Morse Code), use 'Quality'. 95%+ readable, with a very strong waterfall trace, and a clean (no splatter) signal would warrant a 599 report.

Soundcard: A piece of hardware in your computer that produces sound, and often allows input, as with a microphone.

VFO (Variable Frequency Oscillator): It's that knob you use to change frequencies on your radio.

Varicode: A streamlined coding system that allows nearly whatever your computer keyboard can type to be transmitted in shorter lengths.

Waterfall: A visual display of radio signals (and other sounds) found on the tuned frequency.

RELATED WEB LINKS:

ARRL's 'HF Digital Handbook',
by Steve Ford, WB8IMY
<http://www.arrl.org/catalog/?item=1034>

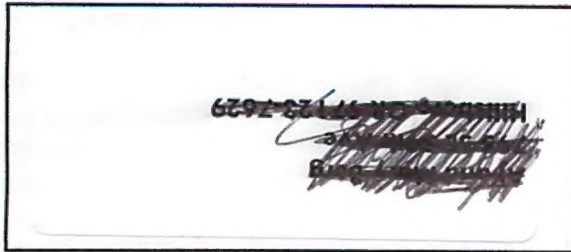
'Technical Handbook for Radio Monitoring I',
Roland Prosch's (DF3LZ)
http://www.hoka.com/th/th_book.htm

Digital Master 780, by Simon Brown, HB9DRV
<http://hrd.ham-radio.ch/DM780/DM780.htm>

Spectrogram and other software:
<http://www.visualizationsoftware.com/>

CLUB MEETING
FEBRUARY 13TH

Web: WWW.OTVARC.ORG
w7oly@arrl.net
Simplex: 147.54 MHz
Repeaters: 146.96 MHz (Goat Min)
223.94 MHz (Goat Min)
440.250 MHz (Goat Min)
440.350 MHz (127.3 KGON Tower)
Editor: Everett W6ABM w6abm@arrl.net



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